Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ TP: \_\_\_\_\_\_\_

HW#6: Midpoint

Geometry

Due Date: Tuesday, Sept. 10th, 2013

**Failure to show work on all problems or use complete sentences will result in a LaSalle.**

|  |  |
| --- | --- |
| 1. Find the coordinates of the midpoint of the segment with the given endpoints.  a. R(3, 1) and S(3, 7)  b. V(2, 4) and W(6, 6) | 2. The endpoints of QR are *Q*(–5, 1) and *R*(6, 5).  a. Graph the coordinates.    b. Find the coordinates of the midpoint *M*. |
| 3. Find the midpoint of the segment *QP*. | 4. Points *W*, *X*, *Y*, and *Z* are collinear. *WZ* = 40, *XZ* = 18, and *Y* is the midpoint of *XZ.* What is the length of *XY*?  W X Y Z |
| 5. Find the indicated length.    a. DE  b. AB  c. AC  d. BD  e. CE  f. BE | 6. On a number line, point Q is located at 10, point R is located at -5, and point S is located at -13.   1. Draw a number line.      1. Find the length of QS. 2. Find the length of RS. 3. How much longer is Segment QS than RS? |
| 7. What is a real- life example of when we would need to find the midpoint of two things? Please do not use any examples given in class. | 8. Now that you know how to find the midpoint from two endpoints, tweak your understanding of the formula to uncover a way to divide a line segment into three equal parts. What would the formula look like? |
| 9. What is the slope of  if C(5, - 4) and  D( 5, 2)?  *Is this a line or a line segment?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_* | 10.  The graph shows the number of new Broadway show productions for certain years. Find the rate of change between:   1. 1995 to 1996      1. 1998 to 1999 2. Which year had the greatest rate of change? How do you know? |
| 11. What is the value of *x*? | 12. *Error Analysis*:  Teresa encountered this problem:  “Find the midpoint if the coordinates of the endpoints are (-4, -10) and (6, 7)”  She proceeded by adding -4 and -10 and dividing by two for the x- coordinate and adding 6 and 7 and dividing by two for the y- coordinate.  Her final answer was a (-7, 6.5). Given that Lucy’s response was incorrect, explain the error in her reasoning |

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ TP: \_\_\_\_\_\_\_

HW#7: Midpoint (Finding Endpoint)

Geometry

Due Date: Wednesday, Sept. 11th, 2013

**Failure to show work on all problems or use complete sentences will result in a LaSalle.**

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| 1. Find the other endpoint of the line segment with the given endpoint and midpoint. | | 2. Find the other endpoint of the line segment with the given endpoint and midpoint. | |
| 3. The midpoint of *XZ* is *M*(1, 2). One endpoint is *X*(0, -2). Find the coordinates of endpoint *Z.* | | 4. The midpoint of *AB* is *M*(8,-8). One endpoint is  A(-4, 10). Find the coordinates of endpoint *B.* | |
| 5. Find the midpoint. | | 6. Find the midpoint. | |
| 7. On a particular line segment, points *Q*, *R*, and *S* are collinear, and R is between Q and S.   1. Draw the line segment. 2. If QR = 8 cm and RS = 13 cm, what is the measure of QS? 3. If *QS* = 31inches and RS = 7 inches, what is the measure of *QR*? | | 8. Choose the correct statement/statements.  Description: http://image.tutorvista.com/Qimages/QD/50234.gif   1. P, Q, R, U, and V are coplanar 2. U, V, N, and M are collinear 3. P, Q, R, T, and S are coplanar 4. M, N, T, S and P are coplanar 5. III and IV only 6. I and II only 7. I only 8. III only | |
| 9a) A line passes through the points (-3, 4) and (4, 1). What is the slope of this line?  Sketch the line: | | | 10a) Find the slope beween (8, 10) and (8, -2).  b) Sketch the line:  c) What do we call this kind of line? |
| 11. Reflection:  Tomas was uncertain about finding an endpoint given a midpoint and the other endpoint: Explain in your own words a method of finding this as basic as you can state it: | 12. Describe a scenario where knowing the midpoint but not exactly the other endpoint might present itself in your life and what knowing this information can do for you? | | |
| 13. Graph the coordinates of the two endpoints and find the midpoint:  [image]and | | | 14. Graph the coordinates of the two endpoints and find the midpoint:  and  [image] |

HW#8: Midpoint Application and Unit 1 Review: Geometry

Due Date: Thursday, Sept. 12th 2013

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ TP: \_\_\_\_\_\_\_

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| **Example 1:** A triangle is located in the (x,y) coordinate plane. The vertices of triangle ABC are A(4, 1), B(-7, 2) and C(0, 5). What are the coordinates for the midpoint of AB? | | | | |
| **Goal**  **(what’s the goal?)** | **Required**  **(list givens)** | **Analysis**  **(what do you need? How will you solve?)** | **Solve** | **Paraphrase (check – does your answer make sense?)** |
|  |  |  |  |  |

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| --- | --- | --- | --- | --- |
| 1) A Opposite vertices of a rectangle in the standard (x, y) coordinate plane have coordinates (5, 37) and (17,7), respectively. What are the coordinates of the center of this rectangle? | | | | |
| **Goal**  **(what’s the goal?)** | **Required**  **(list givens)** | **Analysis**  **(what do you need? How will you solve?)** | **Solve** | **Paraphrase (check – does your answer make sense?)** |
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| 1. Use the diagram to decide whether the given statement is *true* or *false*.   1. Points E, G, and F are collinear. \_\_\_\_\_\_\_\_\_\_ 2. Points E, G, and F are coplanar. \_\_\_\_\_\_\_\_\_\_ 3. Points *H*, *I*, and *G* are collinear. \_\_\_\_\_\_\_\_\_\_ 4. Points *H*, *I*, and *J* are coplanar. \_\_\_\_\_\_\_\_\_\_ |  |
| Description: http://image.tutorvista.com/Qimages/QD/50234.gif  2. Name at least 3 sets of 3 points in the figure above that are coplanar.   1. **\_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_** 2. **\_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_** 3. **\_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_** | 3. If *AC* = 35, what is the value of MC?  x + 5 2x  A M C |
| 4. Find *BC.* |

**Unit 1 Review “Sho Nuff”**

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| --- | --- |
| Use the number line below to answer questions 1 – 4. | |
| 1. What is the distance, in coordinate units, between points *A* and *B*? | 2. What is the distance, in coordinate units, between points *B* and *E*? |
| 3. How much longer is *AD* than *BE*? | 4. How much longer is *CD* than *DE*? |

HW#8a: Midpoint Application and Quiz Review

Geometry

Due Date: Friday, Sept. 13th 2013

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ TP: \_\_\_\_\_\_\_

**Failure to show work on all problems or use complete sentences will result in a LaSalle.**

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| 1) A median of a triangle is a line segment from one vertex to the midpoint of the opposite side. For example, A is a vertex and AE is the line segment that bisects BC. Find the coordinate of each midpoint created by each median (D, E, and F). | **G:** |  | |
| **R:** |  | |
| **A:** |  | |
| **S:** |  | |
| **P:** |  | |
| Use the description of a number line below to answer questions 5 – 6. Sketch the number line below before answering the questions.  *On a number line, point W is located at 3, X is located at –5, Y is located at –16, and Z is located at 11.* | | | |
| 5. What is the distance, in coordinate units, between points *W* and *Z*? | | | 6. What is the distance, in coordinate units, between points *Y* and *Z*? |
| 7. How much longer is *WY* than *XZ*? | | | 8. How much longer is *YZ* than *WX*? |
| 9. Which of the following best describes the points P, Q, and R?   1. The points P, Q, and R are collinear 2. The points P, Q, and R are non-collinear 3. The points P, Q, and R are on the plane R   Description: http://image.tutorvista.com/Qimages/QD/50323.gif   1. I only 2. II only 3. I, II, and III 4. III only | | | 10. Use the diagram below.    Name all the points on plane *P* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Name all the points on plane *R* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Name 3 collinear points \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Name 3 non-collinear points \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 11. On a number line, what is the distance in coordinate units between point *R* at 5 and *Q* at 17? | | | 12. Line *AB* is bisected at point *C*. Find *BC* is if *AC* = 12 cm. |
| 13. A number line has the following points: point *M* at –7, point *N* at 10, point *K* at 2, and point *H* at –3. What is the difference in length between *MN* and *KH*? | | | [image]14. and |